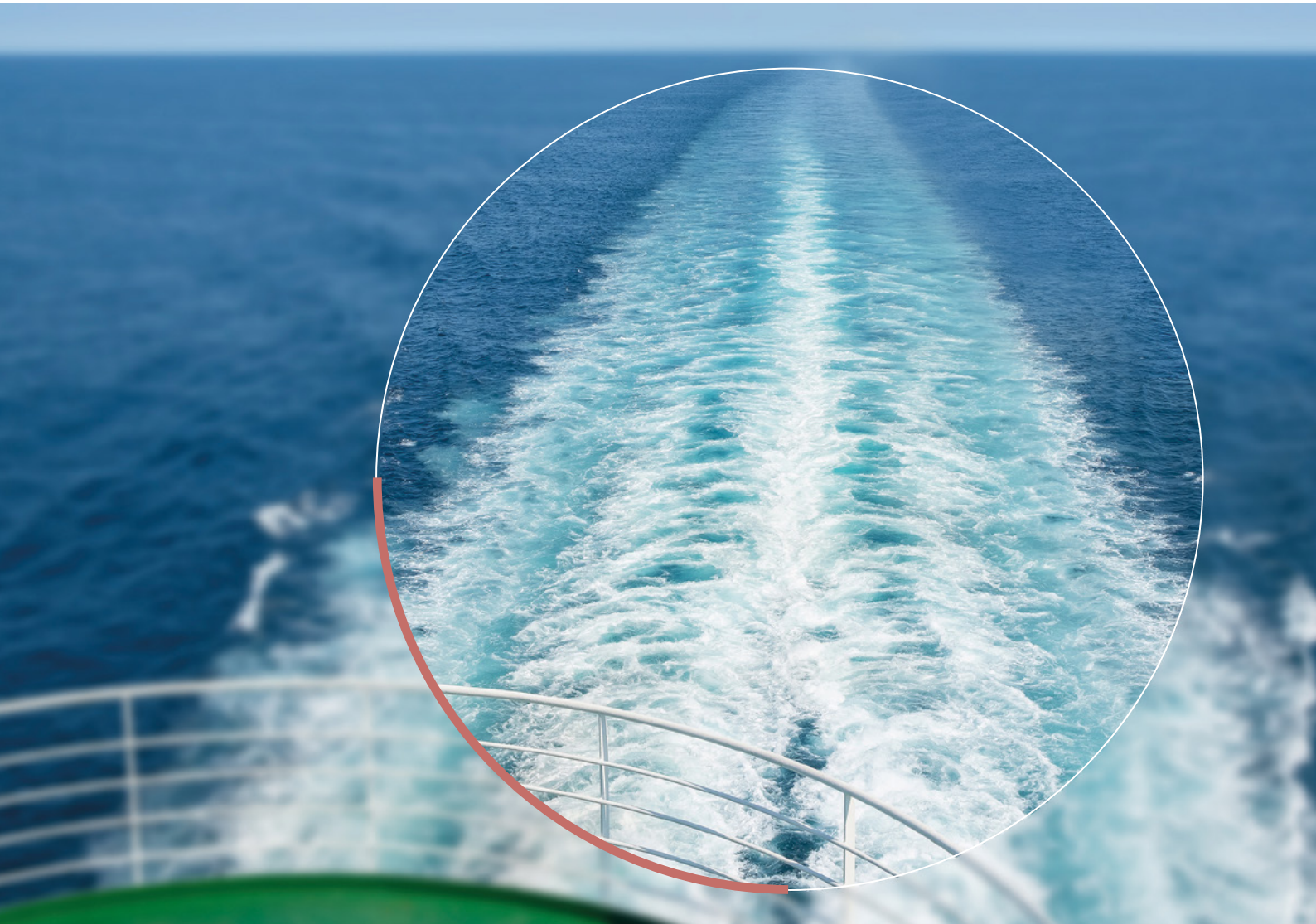# NAVIPILOT 4500N

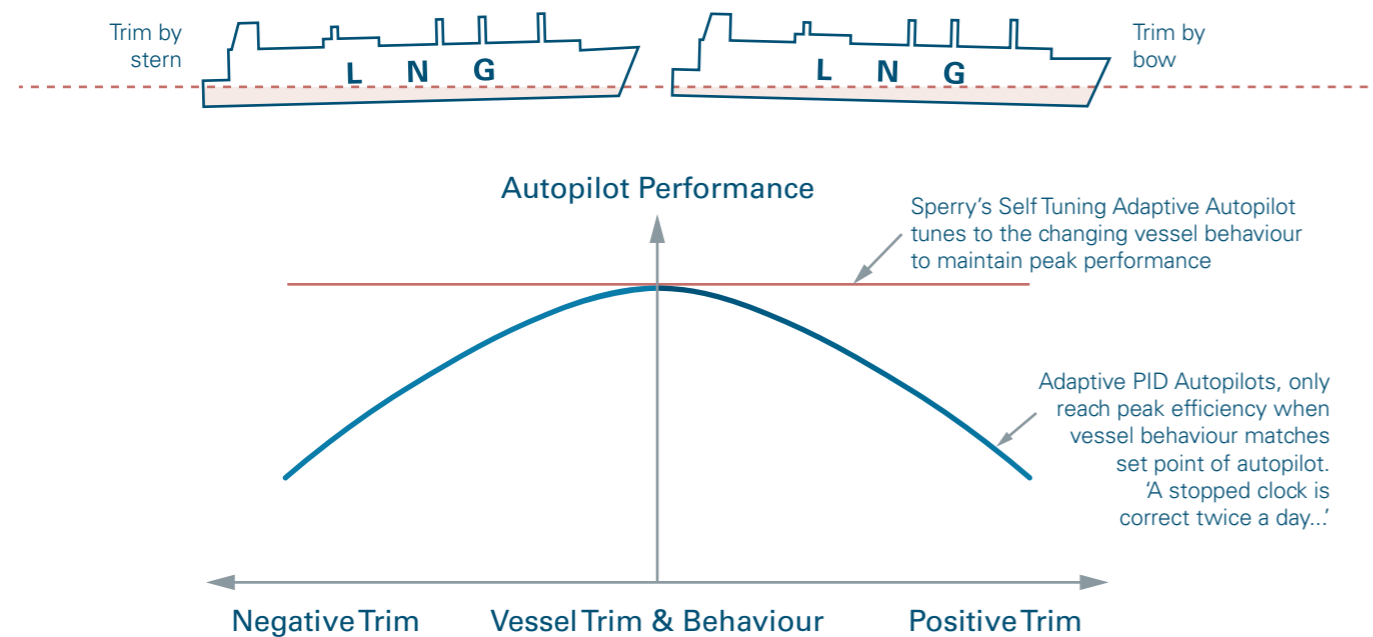Networked, adaptive and self-tuning Heading Control System

NAVIPILOT 4500N is Sperry Marine's new networked, self-adaptive heading control system that combines industry-leading performance with easier deployment and operation. It keeps your vessel more efficiently on course, reduces fuel consumption, emissions and workload on the bridge. With a colour touchscreen, it's intuitive to use and heading control functionality is safely operated with a dial wheel and buttons to avoid unintended changes.

NAVIPILOT 4500N still delivers the heading control performance that Sperry Marine is renowned for, to keep your vessel more efficiently on course.

Sperrymarine
the navigation experts

Self-tuning fully adaptive feature adjusting to the vessel condition

The NAVIPILOT 4500N has a continuous self-tuning adaptation for accurate steering and efficient fuel consumption which enables the system to monitor performance and to automatically adjust rudder gain and counter rudder settings as needed, to keep the tuning optimized even if the vessel behavior is affected by changes in loading and trim or by changing weather conditions.

Trim by stern   **L N G**   **L N G**   Trim by bow

Autopilot Performance

Sperry's Self Tuning Adaptive Autopilot tunes to the changing vessel behaviour to maintain peak performance

Adaptive PID Autopilots, only reach peak efficiency when vessel behaviour matches set point of autopilot. 'A stopped clock is correct twice a day...'

Negative Trim   **Vessel Trim & Behaviour**   Positive Trim

Real-time self-tuning adaption for most accurate steering and efficient consumption despite external and internal factors:

- All vessels have unique behaviour even those of the same design
- Trim changes during voyage due to fuel usage changing weight of the vessel
- Different cargo loading parameters from one voyage to the next
- Longer term changes in behaviour as the vessel ages

Keep your vessel more efficiently on course, reduce fuel consumption, emissions and workload on the bridge

Stay compliant
- Type approved to applicable MED standard

Improve ease of use
- Intuitive 7" colour touch screen for improved readability
- Swipe between screens for improved accessibility of settings
- Harmonized alarm management to reduce frequency and operator workload, with guidance on required action

Increase reliability
- Self-monitors for faults and system configuration via integrated diagnostics for efficient support

Optimise operational schedule
- Adaptive and self-tuning system that continuously monitors and optimises heading control performance to keep the vessel more efficiently on course

Reduce through-life costs
- Easy to install with reduced components, standard network cabling and connections

Improve flexibility
- Heading control available as a standalone system or additional to NAVIGUIDE 4000 manual steering system, for new builds or retrofits

Reduce emissions
- Industry-leading heading control performance with minimised rudder movement required during manoeuvres, less force back, reduced need for propulsion energy and less fuel consumption

Introduction to the NAVIPILOT 4500N
new features on the touch display

Sperry Marine was one of the first companies to design and develop an autopilot with the aim of increasing profits by reducing the running costs of the ship using a fully self-tuning adaptive heading control system. The ultimate version with new modern design provides additional ease of use to the crew whilst permanently indicate all information required by contemporary navigation demands:
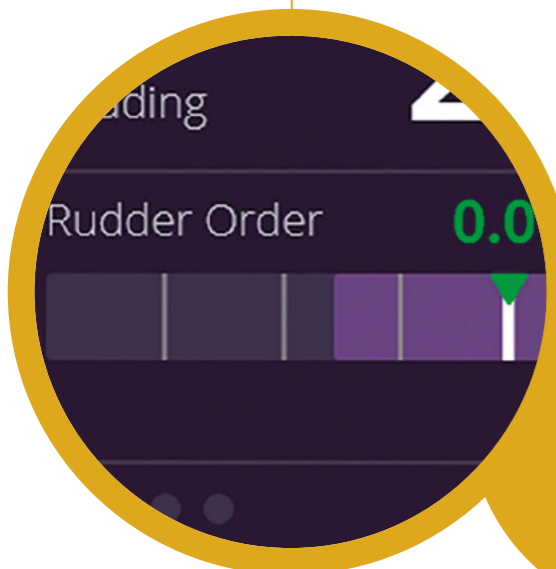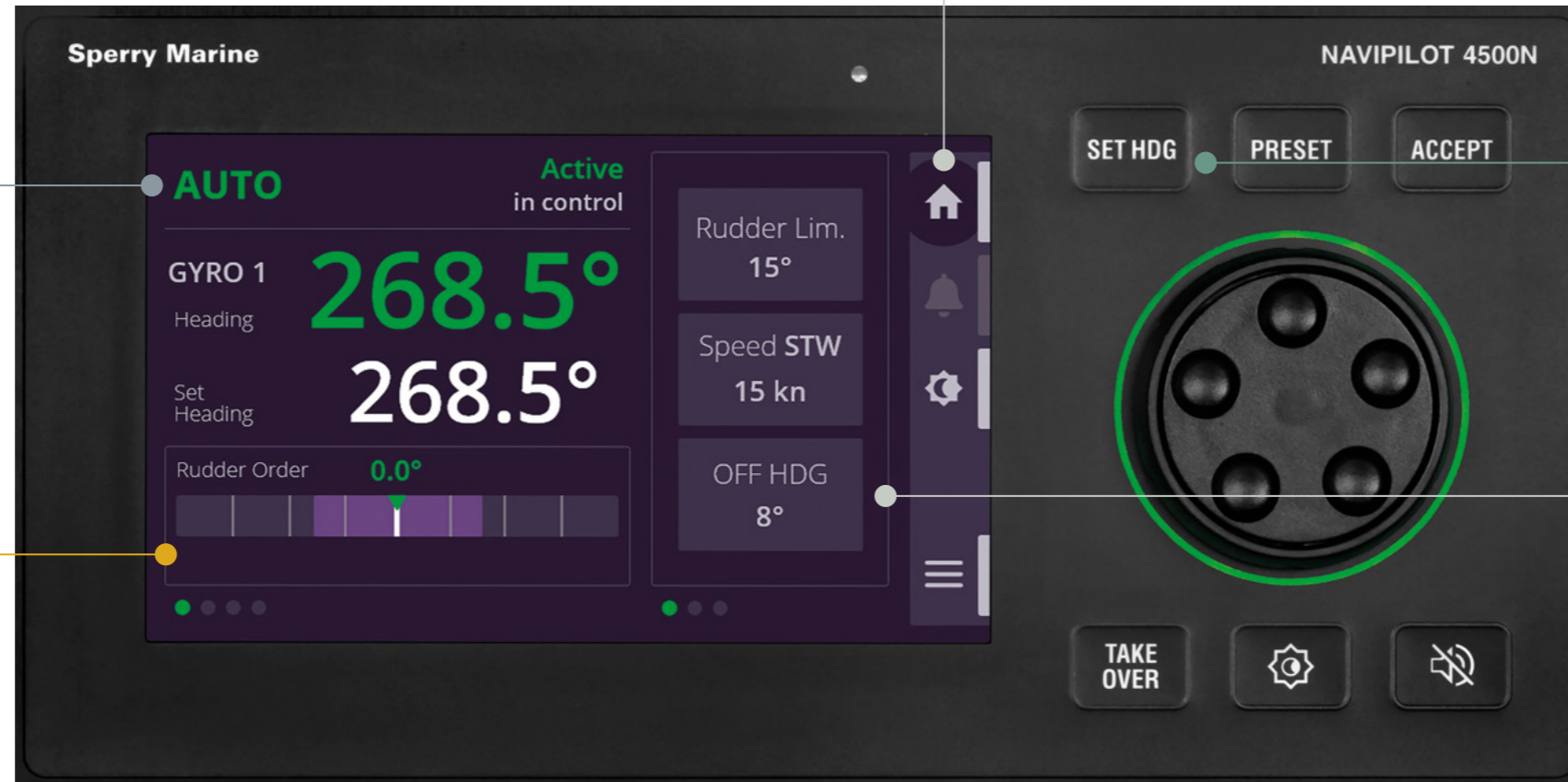
Keep an eye on the main display indicating the actual heading from GYRO, the selected heading, as well as Autopilot active status.
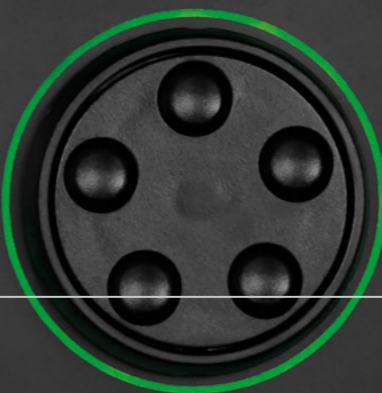
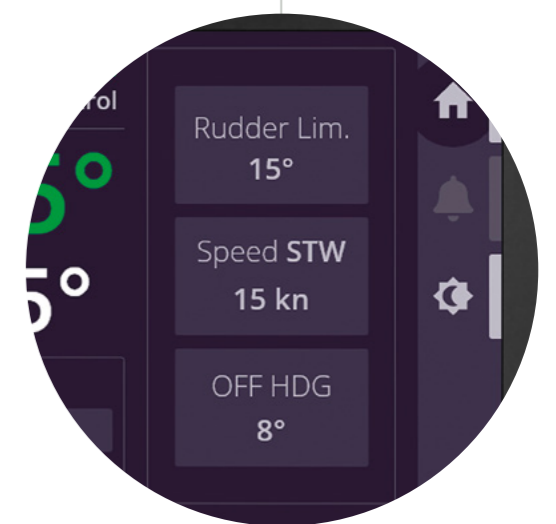Select between several menus: Home, Alert and Dimming.

Safety relevant functionality (eg.: changing headings) accessible by buttons and wheel. For easy operation at all times, the dial wheel is illuminated.

Easy access to different display options. Select data such as rudder order, rudder difference, rate of turn, tuning status.

Easy access to the Autopilot control parameters without losing sight of the essential heading control information thanks to the split screen approach. Change your parameters in the Home and Dimming menus. If alerts are present in the system they will be displayed here automatically, including comprehensive operator guidance.
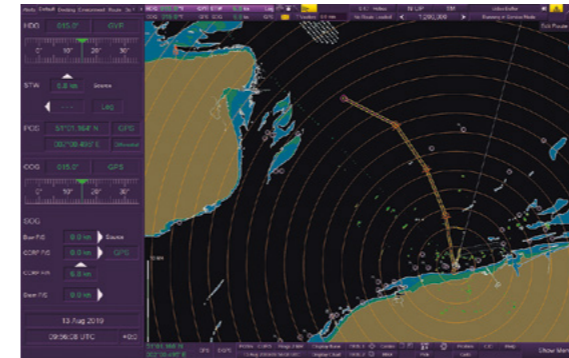
Suitable for every operating scenario

	NAVIPILOT 4500N Standard	**NAVIPILOT 4500N Track** *Software update*	**NAVIPILOT 4500N HSC** *Software update*
Industry-leading systems	Networked, Adaptive Self-tuning Heading Control System	Provides additional track control capability when interfaced to a Sperry Marine integrated bridge or VisionMaster ECDIS system	Provides networked, adaptive and self-tuning heading control tailored to High-Speed Craft
Features	• Continuously self-tuning to optimize steering behaviour in all vessel operational conditions • Fully adaptive to load and weather conditions • Dial wheel to modify set-heading and hardware activation buttons for safest operation • 7" colour touch display for intuitive access to displays and menu settings • Rate or radius turn mode or rudder limit mode selectable • Networked technology for easy installation	• All NAVIPILOT 4500N Standard features • Track control MED compliance with VisionMaster ECDIS system • In Track mode, the NAVIPILOT 4500N follows the heading orders from the VisionMaster system to continuously keep the vessel on the active route's planned track line	• All NAVIPILOT 4500N Standard features • Compensation for jet dead band • Hysteresis settings to fine tune to vessel characteristics
Standards applied	• ISO 11664	• ISO 11664 • ISO 62065	• ISO 16329

General integration options

Our NAVIPILOT 4500N can be used on any kind of vessels, of all size and for all type of operations.

VisionMaster / ECDIS

NAVIPILOT 4500N can be integrated with our VisionMaster ECDIS for advanced Track Control functionality, according to applicable MED standards:
- Enhance safety and reduce operator workload with pre-programmed routes for repetitive courses
- Simplify operations on more complex voyages with multiple waypoints or lots of manoeuvres
- Reduce fuel consumption further with enhanced voyage planning that incorporates weather and sea conditions

NAVIGUIDE 4000 steering control system

NAVIPILOT 4500N can be integrated with our versatile manual steering control system NAVIGUIDE 4000 that provides all required manual steering modes. NAVIGUIDE 4000 can be interfaced with a wide range of steering gears and can thus be adapted to customer needs.

The complete system can be easily used in any new build as an integral part of our Integrated Bridge System offering or in in retrofits to enhance our existing system or any third party's systems.

NAVIGAT 2500 & 3500

Combined with our Fiber Optic Gyro Compasses, the autopilot will be provided with the most stable and accurate heading data available on the market, meaning the autopilot does not need to over-correct. With the result of an overall reduction in rudder movements.

You may also be interested in:

VisionMaster ECDIS
Create a Track Control System through integration of NAVIPILOT 4500N with VisionMaster ECDIS to automate track keeping.

NAVIGAT 2500
Integrate with our NAVIGAT 2500 fiber optic gyro compasses for even higher system performance and efficiency.

NAVIGAT 3500
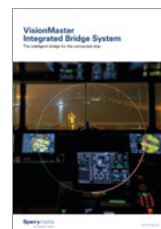Adding highest heading accuracy and motion reference data to your bridge, especially when sailing in high lattitude.

NAVIGAT 100
Single gyro heading input compliance.

NAVIGAT 200
Providing more redundancy with our Network Heading Management System.

VisionMaster Integrated Bridge System
The intelligent bridge for the connected ship.

Global Service and Support

Sperry Marine provides service and support on a 24/365 basis at every major port worldwide, at anchor, offshore and at sea. All Marine Service Engineers are all certified to ensure they install, maintain and repair our products to the industry's highest standards on a consistent global basis. Please see **www.sperrymarine.com/services** for full details of all our service locations.

Find out more

Please visit **www.sperrymarine.com** for more information on Sperry Marine's complete range of products and services. If you would like a quotation, please email **sales@sperrymarine.com**

Sperrymarine
the navigation experts